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###############################################################
#  INSTITUTE TECHNOLOGY OF BANDUNG                            #
#  School of Architecture, Planning,and Policy Development    #
#  Research on HBW Trip Production Modeling by                #
#  Doctoral Student: Rempu Sora Rayat                         #
#  Script Name: Sheet                                         #
#  Purpose:To read list of usernames file (xlsx format)       #
#  Programmer: Richard Shiawase                               #
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import openpyxl

from openpyxl import Workbook

from openpyxl.styles import Alignment

from PlusCodeDescriptionResume import PlusCodeDescriptionResume

class Sheet():

  wb_new = Workbook()

  def __init__(self, Row, listProfile, Column):

    self.row = Row

    self.listProfile = listProfile

    self.column = Column

  def create_header(self, sheet, profile):

    # data header

    i = 1

    self.column.createColumnHeader(profile)

    for key,value in self.column.dictHeader.items():

      # print(header)

      sheet.cell(row=1, column=i).value = key

      sheet.cell(row=2, column=i).value = value

      i += 1

    sheet.merge_cells(start_row=1, start_column=1, end_row=2, end_column=1)

    sheet.merge_cells(start_row=1, start_column=2, end_row=2, end_column=2)

    sheet.merge_cells(start_row=1, start_column=3, end_row=2, end_column=3)

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def insert_row_with_value(self,sheet,profile):

    cx = 3 #init row

    self.newDict = {}

    self.sorted_interval = dict(sorted(profile.sorted_interval.items()))

    for keyInterval,intervalObj in self.sorted_interval.items():

        rowDeficit = (len(intervalObj.getPlusGroupCode())+1) - len(intervalObj.creds)

        newIntervalToLoop = True # every new interval set to True

        if cx != 3:

            cx += 1 #nambahin row setelah interval pertama biar ga mepet


        row = cx # Match with pluscodegroup Row every new interval

        for cred in intervalObj.creds:

            column = 1

            sheet.cell(row=cx, column=1).value = profile.username

            sheet.cell(row=cx, column=2).value = cred.time

            sheet.cell(row=cx, column=3).value = cred.plusCode

            self.previousTimeSplitter = 0


            # injecting column header in profile

            self.column.createColumnHeader(profile)


            # column will expand wider as long as plus code  group size in profile attribute

            for key, value in self.column.dictHeader.items():

                if cred.plusCode == key and column > 3:

                    sheet.cell(row = cx, column = column).value = cred.sebaran


                elif cred.plusCode != key and column > 3 and column < profile.getPlusCodeGroupSize()+4:

                    sheet.cell(row = cx, column = column).value = 0
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        #kolom sebaran
        elif column == profile.getPlusCodeGroupSize()+4:
            sheet.cell(row = cx, column = column).value = cred.sebaran


        #kolom interval
        elif column == profile.getPlusCodeGroupSize()+5:
            if self.newProfile:
                sheet.cell(row = cx, column = column).value = "i = "+cred.interval
        column += 1


    cx+=1


if (rowDeficit > 0):  # Ketika butuh penyetaraan baris pada baris selanjutnya akan dibebankan
    cx += rowDeficit
    print("Row deficit 1adalah " + str(row))


if newIntervalToLoop is True:
    # column will expand wider as long as plus code  group size in profile attribute
    idx = 1
    for keye,val in intervalObj.getPlusGroupCode().items():
        print("tes")
        column=1
        totalSebaran = 0
        probability = 0
        pluscodeResumeObj = PlusCodeDescriptionResume(val.getDescription())


        val.setId(keyInterval)
        for key, value in self.column.dictHeader.items():
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```python
                    if column== profile.getPlusCodeGroupSize()+6: #if shifting columns equal to index +6 from
0

                        sheet.cell(row=row, column=column).value = idx # kemungkinan lokasi index


                    elif column == profile.getPlusCodeGroupSize() + 7:  # if shifting columns equal to index +7
from 0

                        for credo in intervalObj.creds:

                            if idx == credo.sebaran: #if idx == sebaran then calculate

                                totalSebaran+=1

                            sheet.cell(row=row, column=column).value = totalSebaran


                        pluscodeResumeObj.setTotalSebaran(totalSebaran)

                        sheet.cell(row=row+1, column=column).value = intervalObj.getTotalFreq()

                        print("row ke berapa "+str(row+1)+" "+str(intervalObj.getTotalFreq()))

                    elif column == profile.getPlusCodeGroupSize() + 8:  # if shifting columns equal to index +7
from 0

                        # totalSebaran = 0


                        for credo in intervalObj.creds:

                            probability =  pluscodeResumeObj.getTotalSebaran()/intervalObj.getTotalFreq()

                            sheet.cell(row=row, column=column).value = probability


                        pluscodeResumeObj.setProbability(probability)

                        if val.getId() == keyInterval:

                            val.setProbability(str(keyInterval) + " " + str(probability))

                            print("Val adddded to " + str(keyInterval) + " with probability" + str(

                                val.getProbability()) + " and key" + str(keye) + " " + str(val.getId()))


                    column+=1 #shifting columns to the right
```

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        # self.newDict[str(keyInterval)+"_"+str(keye)]=val


        up_dict = {keye: pluscodeResumeObj}

        intervalObj.getPlusGroupCode().update(up_dict)

        print("Intervalee "+profile.username+" " + str(keyInterval) + " memiliki " + keye + " " +
str(pluscodeResumeObj.getProbability())+" ")

        idx+=1

        row+=1
    up_dict = {keyInterval: intervalObj}

    self.sorted_interval.update(up_dict)


cols=1

row=3

self.column.createColumnHeader(profile)

# sorted_interval2 = dict(sorted(profile.sorted_interval.items()))


for key, value in self.column.dictHeader.items():

    if cols == profile.getPlusCodeGroupSize() + 9:  # if shifting columns equal to index +9 from 0

        for keyInterval, intervalObj in self.sorted_interval.items():

            sheet.cell(row=row, column=cols).value = keyInterval # kemungkinan lokasi index

            row+=1

        row = 3

    elif cols == profile.getPlusCodeGroupSize() + 10:  # if shifting columns equal to index +9 from 0

        # for k,v in profile.getPlusCodeGroup().items():

        for keyIntervale, intervalObje in self.sorted_interval.items():

            cola = cols

            mayaDict = intervalObje.getPlusGroupCode()

            # print(mayaDict['0_6P58R5FW+HG'].getProbability())

            for keyb, vals in intervalObje.getPlusGroupCode().items():
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                # if k == key:


                desk = sheet.cell(row=1, column=cola).value

                print("Tesssss pendahuluan C "+str(keyb)+" "+str(keyIntervale)+" "+"
"+str(vals.getProbability())+" "+profile.username)


                #

                sheet.cell(row=row, column=cola).value = vals.getProbability() # kemungkinan lokasi index

                cola+=1

            row+=1


        cols+=1


        # sheet.auto_filter.add_sort_condition('B:B',True)


    def create_sheet(self):
        for profile in self.listProfile:
            self.newProfile = True
            username = profile.username
            profile.mappingCredsToInterval()
            profile.getMappingCredsInterval()
            self.wb_new.create_sheet(username)
            sheet = self.wb_new[username]
            self.create_header(sheet, profile)
            self.insert_row_with_value(sheet,profile)


        # save data
        self.wb_new.save('template5.xlsx')
```

```python
def update_sheet(wb2, profile):
    username1 = profile.username
    sheet = wb2[username1]
    # init dictionary
    groupedPlusCodeDictionary = {}
    colForPlusCodeKey = 1
    colForPlusCode = 4
    cx = 2
    cx2 = 2
    for Time, PlusCode in zip(profile.listTime, profile.listPlusCode):
        try:
            sheet.cell(row=cx, column=1).value = username1
            sheet.cell(row=cx, column=2).value = Time.getTime()
            sheet.cell(row=cx, column=3).value = PlusCode.getPlusCode()


            if search(groupedPlusCodeDictionary, PlusCode.getPlusCode()) is None:
                groupedPlusCodeDictionary[str(colForPlusCodeKey)] = PlusCode.getPlusCode()
                colForPlusCodeKey += 1


            cx += 1
        except Exception as e:
            print(e)


    for x in groupedPlusCodeDictionary:
        try:
            sheet.cell(row=1, column=colForPlusCode).value = groupedPlusCodeDictionary[x]
            colForPlusCode += 1
        except Exception as e:
            print(e)
```

```python
    # update isi kolom
    colForPlusCode = 3
    for PlusCode in profile.listPlusCode:
        plusCode = PlusCode.getPlusCode()
        for x in groupedPlusCodeDictionary:
            if (plusCode == groupedPlusCodeDictionary[x]):
                sheet.cell(row=cx2, column=colForPlusCode + int(x)).value = x
                sheet.cell(row=cx2, column=colForPlusCode + int(x)).alignment = Alignment(horizontal='right')
            else:
                sheet.cell(row=cx2, column=colForPlusCode + int(x)).value = 0
                sheet.cell(row=cx2, column=colForPlusCode + int(x)).alignment = Alignment(horizontal='right')


        cx2 += 1
    del profile
```